

AMENDMENTS TO THE CLAIMS

Claims 1 and 2 were previously cancelled.

Claim 3 is withdrawn from consideration.

Claim 4 was previously cancelled.

Claim 5 is currently being cancelled.

6. (Currently Amended) A method for manufacturing a heat-transfer pipe provided with internal grooves, comprising the continuous steps of:

marking a plurality of rows of grooves including a first row of parallel grooves and a second row of parallel grooves on a flat, plate-like heat-transfer pipe material by using a first marking roll, wherein

the parallel grooves in the first row and the parallel grooves in the second row form regions of V-shaped patterns said regions being ~~arranged symmetrically with respect to~~ serially repeated along a line on said inner surface ~~parallel~~ perpendicular to a pipe axis direction, and

the first row and the second row are different in width in a circumferential direction of the pipe body;

marking secondary grooves at least in part of projected portions formed between respective grooves of the plurality of rows of the grooves which are arranged in the V-shaped patterns by using a second marking roll,

said secondary grooves being fine grooves extending from one side surface of the projected portions to the other side surface thereof; and

forming the flat plate-like heat-transfer pipe material into a cylindrical pipe by using a roll forming device.

7. (Currently Amended) A device for manufacturing a heat-transfer pipe with internal grooves, comprising:

a first marking roll for marking a plurality of rows of grooves including a first row of parallel grooves and a second row of parallel grooves in a flat plate-like heat-transfer pipe material, wherein

the parallel grooves in the first row and the parallel grooves in the second row form regions of V-shaped patterns said regions being ~~arranged symmetrically with respect to~~ serially repeated along a line on said inner surface ~~parallel~~ perpendicular to a pipe axis direction, and

the first row and the second row are different in width in a circumferential direction of the pipe body;

a second marking roll for marking secondary grooves at least in part of projected portions formed between respective grooves of the plurality of rows of the grooves arranged in V-shaped patterns,

said secondary grooves being fine grooves extending from one side surface of the projected portions to the other side surface thereof; and

a roll forming device for forming the flat plate-like heat-transfer pipe material into a cylindrical pipe,

wherein the first marking roll, the second marking roll and the roll forming device are provided successively side by side in a direction of movement of the flat plate-like heat-transfer pipe material so as to continuously mark the grooves arranged in V-shaped patterns and the secondary grooves successively by the first and second marking rolls and then form a cylindrical pipe by roll forming by the roll forming device.

Claim 8 is withdrawn from consideration.

9. (Currently Amended) A heat-transfer pipe provided with internal grooves, comprising:

a pipe body;

a plurality of rows of grooves including a first row of parallel grooves and a second row of parallel grooves on an inner surface of the pipe body, wherein

the parallel grooves in the first row and the parallel grooves in the second row form regions of V-shaped patterns said regions being ~~arranged symmetrically with respect to~~ serially repeated along a line on said inner surface ~~parallel perpendicular~~ to a pipe axis direction,

the first row and the second row are different in width in a circumferential direction of the pipe body; and

secondary grooves, said grooves having a prescribed depth formed in an outer surface of at least part of projected portions formed between respective grooves of the rows of grooves arranged in the V-shaped patterns said secondary grooves being fine grooves extending from one side surface of the projected portions to the other side surface thereof.

